UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/981,320 | 10/16/2001 | Kenneth H. Abbott | 294438006US11 | 4975 |

25096 7590 08/23/2005

PERKINS COIE LLP
PATENT-SEA
P.O. BOX 1247
SEATTLE, WA 98111-1247

| EXAMINER | |
|---|---|
| PILLAI, NAMITHA | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2173 | |

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/981,320 | ABBOTT ET AL. | |
| | Examiner | Art Unit | |
| | Namitha Pillai | 2173 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *17 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-70* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-70* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Response to Amendment*

1. The Examiner acknowledges Applicant's submission on 6/2/05, with amendments to claims 9, 10, 14 and 33 to better specify the claimed invention. All pending claims are rejected, wherein the previous rejection has been maintained.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-70 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U. S. Patent No. 5,910,799 (Carpenter et al.), herein referred to as Carpenter.

Referring to claim 1, Carpenter discloses a method for dynamically determining an appropriate user interface to be presented to a user of a computing device based on a current context (column 2, lines 20-25). Carpenter also discloses for each multiple predefined user interfaces, characterizing multiple properties of the predefined user interface (column 2, lines 50-55). Carpenter also discloses dynamically determining one or more current needs for a user interface to be presented to the user (column 2, lines 55-60). Carpenter discloses selecting for presentation to the user one of the predefined user interfaces who's characterized properties correspond to the dynamically determined current needs (column 2, lines 49-59).

Referring to claims 2 and 28, Carpenter discloses presenting the selected predefined user interface to the user (column 3, lines 61-67).

Referring to claim 3, Carpenter discloses that the computing device is a wearable personal computer (column 4, lines 61-67).

Referring to claim 4, Carpenter discloses that the current context is represented by a plurality of context attributes that each model an aspect of the context (column 3, lines 64-67).

Referring to claim 5, Carpenter discloses that the current context is a context of the user (column 5, lines 8-11).

Referring to claim 6, Carpenter discloses that the selecting is performed at execution time (Figure 3).

Referring to claims 7, 8 and 29, Carpenter discloses that the dynamic determining and the selecting are performed repeatedly so that the user interface that is presented to the user is optimal and appropriate to the current needs (column 6, lines 39-46).

Referring to claims 9 and 10, Carpenter discloses that determining of the current needs includes characterizing user interface (Ul) needs corresponding to a current task being performed, characterizing UI needs corresponding to a current situation of the user, and characterizing UI needs corresponding to current I/0 devices that are available (column 8, lines 60-67).

Referring to claim 11, Carpenter discloses determining of the current needs includes characterizing a current cognitive availability of the user and identifying the current needs based at least in part on the characterized current cognitive availability (column 8, lines 60-67).

Referring to claims 12, 30, 47, 50, 53, 56, 60, 64, 67 and 70, Carpenter discloses that the determining and the selecting are performed without user intervention (column 3, lines 51-55).

Referring to claim 13, Carpenter discloses that the selected user interface includes information to be presented to the user and interaction controls that can be manipulated by the user (column 9, lines 6-21).

Referring to claim 14, Carpenter discloses monitoring the user in order to produce information about the current context, or monitoring a surrounding environment of the user in order to produce information or monitoring the user and the surrounding environment of the user in order to produce information about the current context (column 8, lines 57-67).

Referring to claim 15, Carpenter discloses that the determined current needs are based at least in part on the current context (column 8, lines 60-67).

Referring to claim 16, Carpenter discloses customizing the selected user interface based on the user before presenting of the customized user interface to the user (column 8, lines 59-63).

Referring to claim 17, Carpenter discloses adapting the selected user interface to a type of the computing device before presenting of the adapted user interface to the user (column 4, lines 20-35).

Referring to claim 18, Carpenter discloses adapting the selected user interface to a current activity of the user before presenting of the adapted user interface to the user (column 8, lines 60-65).

Referring to claim 19, Carpenter discloses that the determining of the current needs is based at least in part on the user being mobile (column 8, lines 60-65).

Referring to claim 20, Carpenter discloses a method for dynamically determining an appropriate user interface to be presented to a user of a computing device based on a current context (column 2, lines 20-25). Carpenter also discloses for each multiple predefined user

interfaces, characterizing multiple properties of the predefined user interface (column 2, lines 50-55). Carpenter also discloses dynamically determining one or more current needs for a user interface to be presented to the user (column 2, lines 55-60). Carpenter discloses selecting for presentation to the user one of the predefined user interfaces who's characterized properties correspond to the dynamically determined current needs (column 2, lines 49-59). Carpenter discloses presenting the selected user interface to the user (column 3, lines 61-67).

Referring to claim 21, Carpenter discloses that the computer-readable medium is a memory of a computing device (column 3, lines 44-49).

Referring to claim 22, Carpenter discloses that the computer-readable medium is a data transmission medium transmitting a generated data signal containing the contents (Figure 1).

Referring to claim 23, Carpenter discloses that the contents are instructions that when executed cause the computing device to perform the method (column 3, lines 44-47).

Referring to claims 24 and 26, Carpenter discloses a computing device for dynamically determining an appropriate user interface to be presented to a user of a computing device (column 2, lines 20-23). Carpenter discloses a first component capable of, for each of multiple defined user interfaces, characterizing properties of the defined user interface (column 2, lines 49-59). Carpenter also discloses a second component capable of determining during execution one or more current needs for a user interface to be presented to the user (column 3, lines 60-67). Carpenter also discloses a third component capable of selecting during execution one of the defined user interfaces whose characterized properties correspond to the dynamically determined current needs, the selected user interface for presentation to the user (column 3, lines 60-67).

Referring to claim 25, Carpenter discloses that the first, second and third components are executing in memory of the computing device (column 3, lines 44-47).

Referring to claim 27, Carpenter discloses a method for dynamically determining an appropriate user interface to be presented to a user of a computing device based on a current context (column 2, lines 20-23). Carpenter also discloses determining multiple user interface elements that are available for presentation on the computing device (column 2, lines 49-55). Carpenter also discloses characterizing properties of the determined user interface elements and dynamically determining one or more current needs for a user interface to be presented to the user (column 2, lines 49-59). Carpenter also discloses generating a user interface for presentation to the user, the generated user interface having user interface elements whose characterized properties correspond to the dynamically determined current needs (column 3, lines 61-67).

Referring to claim 31, Carpenter discloses retrieving one or more definitions for combining available user interface elements in an appropriate manner so as to satisfy current needs, and wherein the generating of the user interface uses at least one of the retrieved definitions to combine the user interface elements of the generated user interface in a manner that is appropriate to the determined current needs (column 9, lines 6-22).

Referring to claim 32, Carpenter discloses retrieving one or more definitions for adapting available user interface elements to a type of computing device, and wherein the generating of the user interface uses at least one of the retrieved definitions to combine the user interface elements of the generated user interface in a manner specific to the type of the computing device (column 9, lines 10-13).

Referring to claim 33, Carpenter discloses a method for dynamically presenting an appropriate user interface to a user of a computing device based on a current context (column 2, lines 20-23). Carpenter discloses presenting a first user interface to the user and without user intervention, determining that the current context has changed in such a manner that the first user interface is not appropriate for the user (column 8, lines 59-65). Carpenter discloses that the changed context includes multiple of a change in current location of the user, a change in the current mental state of the user, determined by user input of inquiries made by the user interface and a change in the devices currently available to the user, wherein the interface presented is based on taking into consideration the devices available to the user (column 4, lines 1-15 and column 6, lines 10-30). Carpenter discloses selecting a second user interface that is appropriate for the user based at least in part on the current context, and presenting the second user interface to the user (column 8, lines 63-67).

Referring to claim 34, Carpenter discloses determining that the current context has changed in such a manner that the first user interface is not appropriate for the user includes automatically detecting the changes (column 8, lines 60-67).

Referring to claim 35, Carpenter discloses selecting of the second user interface is performed without user intervention (column 8, lines 63-68).

Referring to claim 36, Carpenter discloses that the second user interface is one of multiple predefined user interfaces (column 9, lines 5-10).

Referring to claim 37, Carpenter discloses that the second user interface is dynamically generated after the determining of the changes in the current context (column 8, lines 59-67).

Referring to claim 38, Carpenter discloses that the second interface is a modification of the first user interface (column 9, lines 5-10).

Referring to claim 39, Carpenter discloses modifying of the first user interface ("UI") includes modifying prominence of one or more UI elements of the first user interface, modifying associations between the UI elements, modifying a metaphor associated with the first user interface, modifying a sensory analogy associated with the first user interface, modifying a degree of background awareness associated with the first user interface, modifying a degree of invitation associated with the first user interface, and/or modifying a degree of safety of the user based on one or more indications presented as part of the second user interface that were not part of the first user interface (column 9, lines 5-20).

Referring to claim 40, Carpenter discloses a method for characterizing predefined user interfaces to allow a user interface that is currently appropriate to be presented to a user of a computing device to be dynamically selected (column 4, lines 50-60). Carpenter discloses for each of multiple predefined user interfaces, characterizing the user interface by, determining an intended use of the predefined user interface, determining one or more user tasks with which the predefined user interface is compatible, and determining one or more computing device configurations with which the predefined user interface is compatible, so that one of the predefined user interfaces can be dynamically selected for presentation to a user based on the selected user interface being currently appropriate (column 9, lines 1-22).

Referring to claim 41, Carpenter discloses determining information about a current context and selecting one of the predefined user interfaces that is appropriate for the current context (column 9, lines 1-20).

Referring to claim 42, Carpenter discloses characterizing of each of the predefined user interfaces includes at least one of characterizing content of the user interface, characterizing a cost of using the user interface, characterizing a relevant date for the user interface, characterizing a design of elements of the user interface, characterizing functions of the elements of the user interface, characterizing hardware affinity of the user interface, characterizing an identification of the user interface, characterizing an importance of the user interface, characterizing input and output devices that are compatible with the user interface, characterizing languages to which the user interface corresponds, characterizing a learning profile of the user interface, characterizing task lengths for which the user interface is compatible, characterizing a name of the user interface, characterizing physical availability of the user interface, characterizing a power supply of the user interface, characterizing a priority of the user interface, characterizing privacy supported by the user interface, characterizing processing capabilities used for the user interface, characterizing safety capabilities of the user interface, characterizing security capabilities of the user interface, characterizing a source of the user interface, characterizing storage capabilities used for the user interface, characterizing audio capabilities of the user interface, characterizing task complexities compatible with the user interface, characterizing themes corresponding to the user interface, characterizing an urgency level for the user interface, characterizing a user attention level for the user interface, characterizing user characteristics compatible with the user interface,

characterizing user expertise levels compatible with the user interface, characterizing user preference accommodation capabilities of the user interface, characterizing a version of the user interface, and characterizing video capabilities of the user interface (column 8, lines 45-67 and column 9, lines 1-20).

Referring to claim 43, Carpenter discloses characterizing of each of the predefined user interfaces is performed without user intervention (column 8, lines 60-67).

Referring to claims 44, 48 and 54, Carpenter discloses a method for dynamically determining requirements for a user interface that is currently appropriate to be presented to a user of a computing device based on a current context (column 3, lines 60-67). Carpenter also discloses dynamically determining one or more current characteristics of a user interface that is currently appropriate to be presented to the user, the determining based at least in part on the current context and identifying at least some of the determined characteristics as requirements for a user interface that is currently appropriate to be presented to the user (column 3, lines 60-67).

Referring to claims 45, 49, 52 and 55, Carpenter discloses determining a user interface that satisfies the determined requirements and presenting the determined user interface to the user (column 3, lines 64-67).

Referring to claim 46, Carpenter discloses that the determining of the current characteristics includes determining characteristics corresponding to a current task being performed, determining characteristics corresponding to a current situation of the user, and/or determining characteristics corresponding to current I/0 devices that are available (column 3, lines 60-67).

Referring to claim 51, Carpenter discloses a method for dynamically determining requirements for a user interface that is currently appropriate to be presented to a user of a computing device (column 3, lines 60-67). Carpenter discloses dynamically determining one or more current characteristics of a user interface that is currently appropriate to be presented to the user, the determining based at least in part on a current I/0 devices that are available to the computing device and identifying at least some of the determined characteristics as requirements for a user interface that is currently appropriate to be presented to the user (column 9, lines 5-20).

Referring to claim 57, Carpenter discloses a method for dynamically determining characteristics of a user interface that is currently appropriate to be presented to a user of a computing device (column 3, lines 60-67). Carpenter also discloses dynamically determining a level of attention which the user can currently give to the user interface and dynamically determining one or more current characteristics of a user interface that is currently appropriate to be presented to the user based at least in part on the determined level of attention (column 8, lines 60-67 and column 9, lines 1-20).

Referring to claim 58, Carpenter discloses determining a user interface that includes the determined characteristics and presenting the determined user interface to the user (column 3, lines 60-67).

Referring to claim 59, Carpenter discloses that the determined level of attention is based on a determined current cognitive load of the user (column 8, lines 60-67 and column 9, lines 1-20).

Referring to claim 61, Carpenter discloses determining of the level of attention is performed without user intervention (column 9, lines 5-10).

Referring to claim 62, Carpenter discloses a method for determining techniques for dynamically generating an appropriate user interface to be presented to a user of a computing device (column 2, lines 20-25). Carpenter discloses retrieving one or more definitions for dynamically combining available user interface elements in an appropriate manner so as to satisfy current needs, and selecting one of the retrieved definitions based on current conditions so that available user interface elements can be combined in an appropriate manner to generate a user interface that is appropriate to be presented to the user (column 3, lines 55-67).

Referring to claim 63, Carpenter discloses using the selected definition to generate a user interface that is appropriate to be presented to the user and presenting the generated user interface to the user (column 3, lines 60-67).

Referring to claim 65, Carpenter discloses a method for determining techniques for dynamically generating an appropriate user interface to be presented to a user of a computing device (column 3, lines 60-67). Carpenter discloses retrieving one or more definitions for dynamically adapting available user interface elements to a type of computing device and selecting one of the retrieved definitions based on current conditions so that available user interface elements can be adapted to the type of the computing device so as to generate a user interface that is appropriate to be presented to the user (column 9, lines 1-20).

Referring to claim 66, Carpenter discloses using the selected definition to generate a user interface that is appropriate to be presented to the user and presenting the generated user interface to the user (column 3, lines 60-67).

Referring to claim 68, Carpenter discloses a method for dynamically determining an appropriate user interface to be presented to a user of a computing device based on a current context (column 2, lines 20-25). Carpenter also discloses determining multiple user interface elements that are available for presentation on the computing device and characterizing properties of the determined user interface elements, so that available user interface elements whose characterized properties are appropriate for a current context can be selected and combined in an appropriate manner to generate a user interface that is appropriate to be presented to the user (column 8, lines 57-67).

Referring to claim 69, Carpenter discloses combining available user interface elements whose characterized properties are appropriate for a current context in order to generate a user interface that is appropriate to be presented to the user and presenting the generated user interface to the user (column 9, lines 5-20).

***Response to Arguments***

3. Applicant's arguments filed 5/17/05 have been fully considered but they are not persuasive.

With respect to Applicant's arguments that Carpenter does not teach modifying the UI elements that are part of a software application's UI. Applicant's claims mainly refer to providing an appropriate user interface to a computing device, wherein the independent claims do not point out providing user interface elements for a specific software application. Carpenter also further discloses an example, wherein the user of a medical environment, based on location of the user, would change the elements of the user interface, wherein these elements are part of the medical application (column 8, lines 57-67).

With respect to Applicant's arguments that Carpenter does not teach generating a user interface by combining user interface elements to address current needs. Carpenter teaches determining the user's current needs, and displaying a set of icons represented as user interface elements wherein a set of elements are grouped together and combined to form a user interface that addresses the current needs. Carpenter further teaches that these user interface elements are based on predefined or preselected elements, wherein these represent predefined definitions for dynamically combining the set of icons or user interface elements (column 4, lines 49-60).

With respect to Applicant's arguments that Carpenter does not disclose characterizing multiple properties of predefined user interfaces so that user interface elements can be matched to dynamically determined current needs. Based on examples given by Carpenter, the dynamic process of determining current needs, is based on dynamically determining the current user location, wherein multiple properties of the predefined user interfaces include historical use of user interface elements, further including security measures and user needs that may also be an property used in characterizing the user interfaces (column 5, lines 16-25 and column 6, lines 15-30). Carpenter discloses that multiple properties are used in determining the user interfaces, wherein based on taking these proprieties into consideration, the proper user interface is displayed based on current needs.

With respect to Applicant's arguments that Carpenter does not disclose a change in current mental state of the user or a change in devices currently available to the user. Carpenter discloses that user options are given to the user, wherein user input is made by the user, thus determining the current mental state of the user, wherein an option chosen by the user would be a reflection of the current mental state of the user (column 6, lines 25-32). Carpenter further

discloses determining any change in devices, wherein the type of device and its location or change in location is determined to display the ideal user interface to the user.

***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Responses to this action should be submitted as per the options cited below: The United States Patent and Trademark Office requires most patent related correspondence to be: a) faxed to the Central Fax number (571-273-8300) (updated as of July 1 5, 2005), b) hand carried or delivered to the Customer Service Window (located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), c) mailed to the mailing address set forth in 37 CFR 1 . 1 (e.g., P.O. Box 1450, Alexandria, VA 22313-1450), or d) transmitted to the Office using the Office's Electronic Filing System. On July 15, 2005, the Central Facsimile (FAX) Number will change from 703-872-9306 to 571-273-8300. Faxes sent to the old number will be routed to the new number until September 15, 2005. After September 15, 2005, the old number will no longer be in

service and 571-273-8300 will be the only facsimile number recognized for "centralized delivery." The official notice dated June 20, 2005 also includes an "updated list of exceptions to the centralized delivery and facsimile transmission policy for patent related correspondence." Questions regarding this notice may be e-mailed to Patentpractice@uspto.gov, or directed to the Inventors' Assistance Center by telephone at 800-786-9199, or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Namitha Pillai whose telephone number is (571) 272-4054. The examiner can normally be reached on 8:30 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached on (571) 272-4048.

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2100.

Namitha Pillai
Assistant Examiner
Art Unit 2173
August 16, 2005

JOHN CABECA
SUPERVISORY PATENT EXAMIN
TECHNOLOGY CENTER 21